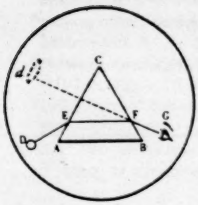

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31.30.N X-ray spectroscopy

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31.30.R Electric and magnetic moments; polarizability

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31.40.– Fluorescence, resonances, excitations, and energy transfer

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31.40.D Magnetic resonances

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31.40.G Fluorescence and quenching

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31.40.L Level crossing and optical pumping

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31.90.+ Other topics in atomic physics

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32. MOLECULES

32.20.– Molecular structure and constants derived from experimental measurements

32.20.D Interatomic distances and angles

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32.20.G Bond strengths, dissociation energies, hydrogen bonding, molecular core binding energy, etc.

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32.20.J Barrier heights (internal rotation, inversion); rotational isomerism

Model of collective π-electron motion in molecules. Part 2 —L. V. Iogansen and V. V. Malov. 37(1), 25–8 (Jul. 1974)

32.20.M Electric and magnetic moments (and derivatives), polarizability, and magnetic susceptibility

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32.20.P Rotation, vibration, and vibration-rotation constants

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32.40.– Quantum chemistry

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32.40.B General theory of electronic structure, electronic transitions, and chemical binding

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32.40.F Molecular orbital methods and SCF calculations

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32.40.M Excited states

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32.40.P Molecular solids

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32.40.Q Potential energy surfaces for chemical reactions

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32.40.R Environmental and solvent effects

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32.40.S Corrections to Born–Oppenheimer approximation and Jahn–Teller effect

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32.40.T Hyperfine interactions

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32.40.W Time–dependent phenomena: excitation and relaxation processes, and reaction rates

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32.60.– Molecular spectroscopy (measurement and phenomenology)

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32.60.B Calculational methods, including new theoretical techniques and applications of group theory

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32.60.D Radio–frequency and microwave spectra

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32.60.F Infrared spectra and Raman spectra

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32.60.G MODOR and PMDR (microwave optical double resonance spectroscopy, phosphorescence microwave double resonance spectroscopy)

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32.60.J Visible and ultraviolet spectra

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32.60.W Calculation of vibronic and rovibronic interactions, and rotation–electron–spin interactions (including Hund's coupling cases, Renner–Teller effects, etc.)

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32.80.– Magnetic resonances and relaxation in molecules

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34. COLLISION PROCESSES AND INTERACTIONS OF MOLECULES, ATOMS, OR IONS

34.20.– Intermolecular potentials and forces

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34.50.– Inelastic processes

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34.50.F Vibrational energy transfer

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34.50.H Electronic excitation and ionization (including beam foil excitation)

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34.70.– Electron scattering

34.70.D Atomic excitation and ionization by electron impact

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68.30.C Infrared and Raman spectra in liquids

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68.45.+ Stimulated emission

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71. OPTICS

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